

Application Number 10/691,917
Amendment dated December 12, 2006
Responsive to Office Action mailed October 12, 2006

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Previously Presented): A method comprising:
defining an event;
monitoring therapy delivered by a medical device during occurrence of the defined event;
generating therapy information based on the monitored therapy;
associating the therapy information with the defined event;
subsequently detecting the defined event; and
providing therapy to a patient via the medical device according to the therapy information in response to the detection.

Claim 2 (Previously Presented): The method of claim 1, wherein defining an event and subsequently detecting the defined event comprise receiving indications of the event from a user.

Claim 3 (Original): The method of claim 2, wherein receiving an indication of the event from a user comprises receiving an indication of at least one of an activity and a posture undertaken by the patient from the user.

Claim 4 (Previously Presented): The method of claim 49, wherein defining an event comprises:
monitoring an output of a sensor in response to receiving the command, the output of the sensor reflecting a physiological parameter of the patient; and
defining the event based on the sensor output, and
wherein subsequently detecting the event comprises:
monitoring the output of the sensor; and
comparing the sensor output to the defined event.

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Claim 5 (Original): The method of claim 4, wherein the sensor comprises an accelerometer.

Claim 6 (Original): The method of claim 4, wherein the sensor output reflects at least one of motion and posture of the patient.

Claim 7 (Original): The method of claim 4, wherein defining the event based on the sensor output comprises recording the sensor output over a period of time subsequent to receiving the command.

Claim 8 (Previously Presented): The method of claim 49, wherein generating therapy information comprises recording a value of a therapy parameter that controls delivery of therapy by the medical device in response to the command.

Claim 9 (Previously Presented): The method of claim 8, wherein recording the value of the therapy parameter in response to the command comprises recording a change to the therapy parameter made by the user subsequent to receipt of the command.

Claim 10 (Original): The method of claim 9, wherein recording a change to the therapy parameter comprises recording changes to the therapy parameter made by the user over a period of time subsequent to receipt of the command.

Claim 11 (Original): The method of claim 10, wherein providing therapy to a patient according to the therapy information comprises changing the therapy parameter at a time subsequent to detection of the event according to the recorded changes to the therapy parameter.

Claim 12 (Previously Presented): The method of claim 9, wherein the medical device includes an implantable medical device, and recording the change to the therapy parameter comprises receiving the change to the therapy parameter made by the user via a programming device.

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Claim 13 (Previously Presented): The method of claim 12, wherein the implantable medical device includes an implantable neurostimulator, and receiving the change to the therapy parameter comprises receiving a change to at least one of a pulse amplitude, a pulse width, and a pulse rate of stimulation energy delivered by the neurostimulator.

Claim 14 (Previously Presented): The method of claim 8, wherein recording the value of the parameter comprises receiving the value of the parameter and a time from a user, and providing therapy to a patient according to the therapy information comprises changing delivery of therapy at a time subsequent to detection of the event according to the value and time received from the user.

Claim 15 (Original): The method of claim 1, wherein providing therapy to a patient according to the therapy information comprises suspending delivery of therapy.

Claim 16 (Original): The method of claim 1, further comprising presenting the defined event to a clinician as diagnostic data.

Claim 17 (Original): The method of claim 16, wherein presenting the defined event to the clinician comprises presenting the defined event as a marker within a timing diagram.

Claim 18 (Previously Presented): The method of claim 1, further comprising receiving a command from a user to enter a learning mode in order to define the event and record and associate therapy information with the defined event, wherein the user is one of a clinician and the patient.

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Claim 19 (Currently Amended): A medical device comprising:
a memory; and
a processor that defines an event, monitors therapy delivered by the a medical device during occurrence of the defined event, generates therapy information based on the monitored therapy, associates the therapy information with the defined event within the memory, subsequently detects the defined event, and controls delivery of therapy to a patient according to the therapy information in response to the detection.

Claim 20 (Previously Presented): The medical device of claim 19, further comprising a user interface, wherein the processor defines the event and subsequently detects the defined event by receiving indications of the event from a user via the user interface.

Claim 21 (Original): The medical device of claim 20, wherein the event comprises at least one of an activity and a posture undertaken by the patient, and the processor receives indications of the at least one of an activity and posture from the user.

Claim 22 (Previously Presented): The medical device of claim 51, further comprising a sensor that generates an output as a function of a physiological parameter of the patient, wherein the processor monitors the output of the sensor in response to receiving the command from the user, defines the event based on the sensor output, and subsequently detects the event by monitoring the output of the sensor and comparing the sensor output to the defined event.

Claim 23 (Original): The medical device of claim 22, wherein the sensor output reflects at least one of motion and posture of the patient.

Claim 24 (Original): The medical device of claim 22, wherein the sensor comprises an accelerometer.

Claim 25 (Original): The medical device of claim 24, wherein the accelerometer comprises a multi-axis accelerometer.

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Claim 26 (Original): The medical device of claim 22, wherein the processor defines the event by storing a recording of the sensor output over a period of time after receipt of the command within the memory.

Claim 27 (Previously Presented): The medical device of claim 51, wherein the therapy information comprises a value of a parameter that controls delivery of therapy to the patient, and the processor associates the value and the defined event within the memory in response to the command.

Claim 28 (Original): The medical device of claim 27, wherein the therapy information reflects a change to the parameter made by a user subsequent to providing a command, and the processor records the change and associates the recorded change with the defined event within the memory in response to the command.

Claim 29 (Original): The medical device of claim 28, wherein the therapy information reflects changes to the parameter made by the user over a period of time subsequent to providing the command, and the processor records the changes over the period of time and associates the recorded changes with the defined event within the memory in response to the command.

Claim 30 (Previously Presented): The medical device of claim 29, wherein the processor changes the therapy parameter at a time subsequent to detection of the event according to the recorded changes to the therapy parameter.

Claim 31 (Original): The medical device of claim 27, wherein the processor receives the value of the parameter and a time from a user via a user interface, and changes delivery of therapy at a time subsequent to detection of the event according to the value and time received from the user.

Claim 32 (Original): The medical device of claim 19, wherein the processor stores the defined event within the memory as diagnostic data for presentation to a clinician.

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Claim 33 (Previously Presented): The medical device of claim 32, further comprising a user interface, wherein the processor presents the defined event to the clinician as a marker within a timing diagram via the user interface.

Claim 34 (Previously Presented): The medical device of claim 19, wherein the processor suspends delivery of therapy in response to the detection of the previously defined event.

Claim 35 (Previously Presented): The medical device of claim 19, wherein the medical device comprises an implantable neurostimulator.

Claim 36 (Previously Presented): The medical device of claim 19, wherein the medical device comprises a programming device that communicates with an implantable medical device.

Claim 37 (Previously Presented): The medical device of claim 19, wherein the processor receives a command from a user to enter a learning mode in order to define the event and record and associate therapy information with the defined event, and wherein the user comprises one of a clinician and the patient.

Claim 38 (Previously Presented): A computer-readable medium comprising instructions that cause a programmable processor to:

- define an event;
- monitor therapy delivered by a medical device during occurrence of the defined event;
- generate therapy information based on the monitored therapy;
- associate the therapy information with the defined event;
- subsequently detect the defined event; and
- control delivery of therapy to the patient via the medical device according to the therapy information in response to the detection.

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Claim 39 (Previously Presented): The computer-readable medium of claim 38, wherein the instructions that cause the programmable processor to define an event and subsequently detect the defined event comprise instructions that cause the programmable processor to receive indications of the event from a user.

Claim 40 (Previously Presented): The computer-readable medium of claim 39, wherein the instructions that cause the programmable processor to receive indications of the event from the user comprise instructions that cause the programmable processor to receive indications of at least one of an activity and a posture undertaken by the patient from the user.

Claim 41 (Previously Presented): The computer-readable medium of claim 53, wherein the instructions that cause the programmable processor to define an event comprises instructions that cause the programmable processor to:

monitor an output of a sensor in response to receiving the command, the output of the sensor reflecting a physiological parameter of the patient; and

define the event based on the sensor output, and

wherein the instructions that cause the programmable processor to subsequently detect the defined event comprise instructions that cause the programmable processor to:

monitor the output of the sensor; and

compare the sensor output to the defined event.

Claim 42 (Previously Presented): The computer-readable medium of claim 41, wherein the instructions that cause the programmable processor to define the event based on the sensor output comprise instructions that cause the programmable processor to record the sensor output over a period of time subsequent to receiving the command.

Claim 43 (Previously Presented): The computer-readable medium of claim 53, wherein the instructions that cause the programmable processor to generate therapy information comprise instructions that cause the processor to record a value of a parameter that controls delivery of therapy by the therapy device in response to the command.

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Claim 44 (Previously Presented): The computer-readable medium of claim 43, wherein the instructions that cause the programmable processor to record a value of a therapy parameter comprises instructions that cause the programmable processor to record a change to the parameter made by the user subsequent to receipt of the command.

Claim 45 (Previously Presented): The computer-readable medium of claim 44, wherein the instructions that cause the programmable processor to record a change to the parameter comprises instructions that cause the programmable processor to record changes to the therapy parameter made by the user over a period of time subsequent to receipt of the command.

Claim 46 (Previously Presented): The computer-readable medium of claim 45, wherein the instructions that cause the programmable processor to provide therapy to a patient according to the therapy information comprise instructions that cause the programmable processor to change the therapy parameter at a time subsequent to detection of the event according to the recorded changes to the therapy parameter.

Claim 47 (Previously Presented): The computer-readable medium of claim 43, wherein the instructions that cause the programmable processor to record a value of a parameter comprise instructions that cause the programmable processor to receive the value of the parameter and a time from the user, and the instructions that cause the programmable processor to provide therapy to a patient according to the therapy information comprise instructions that cause the programmable processor to change delivery of therapy at a time subsequent to detection of the event according to the value and time received from the user.

Claim 48 (Previously Presented): The computer-readable medium of claim 38, wherein the instructions cause the processor to receive a command from a user to enter a learning mode in order to define the event and record and associate therapy information with the defined event, and wherein the user is one of a clinician and the patient.

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Claim 49 (Previously Presented): The method of claim 1, further comprising receiving a command from a user to enter a learning mode in order to define the event and associate the therapy information with the defined event.

Claim 50 (Previously Presented): The method of claim 1, wherein providing therapy comprises managing pain in the patient.

Claim 51 (Previously Presented): The medical device of claim 19, further comprising a user interface, wherein the processor receives a command to enter a learning mode from a user via the user interface in order to define the event and associate the therapy information with the defined event.

Claim 52 (Previously Presented): The medical device of claim 19, further comprising a pulse generator that is controlled by the processor to deliver pain management therapy to the patient.

Claim 53 (Previously Presented): The computer readable medium of claim 38, wherein the instructions cause the processor to receive a command from a user to enter a learning mode in order to define the event and associate the therapy information with the defined event.

Claim 54 (Previously Presented): The computer readable medium of claim 38, wherein the instructions that cause the processor to provide therapy comprise instructions that cause the processor to control a pulse generator to deliver pain management therapy to the patient.